

## **AMENDMENTS TO THE CLAIMS**

1. (***Previously Presented***) A system for communicating information between a downhole location in a wellbore containing fluid therein and an uphole location, comprising:

- . a first device disposed at one of said downhole and said uphole locations, said first device including a transmitter for transmitting a first signal;
- . a second device disposed at the other of said downhole and said uphole locations, said second device including a receiver for receiving a second signal; and
- . at least one repeater disposed at a predetermined location in a wall of the wellbore containing fluid therein, said repeater comprising a receiver for receiving said first signal that has been attenuated through a transmission medium, a circuit for amplifying the received signal and a transmitter for transmitting said second signal, wherein said second signal is indicative of said first signal.

2. (***Previously Presented***) The system of claim 1, wherein the at least one repeater comprises:

an electronics module; and  
an energy source.

3. (***Previously Presented***) The system of claim 1, wherein the electronics module comprises a processor, that acts according to programmed instructions, for controlling an operation of the repeater.

4. (***Currently Amended***) The system according to claim 2, wherein the energy source is one of (i) a downhole generator ~~battery~~, (ii) a thermoelectric generator, and (iii) a combination of a battery and a thermoelectric generator.

5. **(Previously Presented)** The system of claim 1, wherein the at least one repeater is adapted to receive and transmit a signal at a plurality of frequencies.
6. **(Original)** The system of claim 1, wherein the predetermined location is between said downhole location and said uphole location.
7. **(Previously Presented)** The system of claim 1, wherein the at least one repeater is autonomous.
8. **(Previously Presented)** The system of claim 1, wherein the at least one repeater includes at least one sensor for detecting at least one parameter of interest related to one of: (1) health of the at least one repeater; and a downhole condition.
9. **(Previously Presented)** The system of claim 8, wherein the at least one sensor is at least one of (i) a pressure sensor, (ii) a temperature sensor, and (iii) a resistivity sensor.
10. **(Previously Presented)** The system of claim 8, wherein the at least one parameter of interest includes at least one of: (i) wellbore fluid pressure, (ii) wellbore fluid temperature, (iii) wellbore fluid resistivity (iv) formation fluid pressure (v) formation fluid temperature, and (vi) formation fluid resistivity.
11. **(Previously Presented)** The system of claim 1, wherein the first signal and the second signal are at least one of (i) an electromagnetic signal, (ii) a radio frequency signal, (iii) an acoustic signal and (iv) a mud pulse signal.
12. **(Currently Amended)** The system of claim 1, wherein the first signal and the second signal each is a wireless signal.

13. (**Original**) The system of claim 8, wherein at least one of the first signal and the second signal includes data related to the at least one parameter of interest.

14. (**Currently Amended**) A method for communicating information between a downhole location in a wellbore containing fluid therein and an uphole location, comprising:

- . disposing at least one signal repeater at a predetermined location in a wall of the wellbore containing fluid therein;
- . transmitting a first signal from a first device located at one of said uphole location and said downhole location;
- . receiving said first signal that has been attenuated through a transmission medium at the at least one repeater, amplifying the received signal and transmitting a second signal indicative of said first signal; and
- . receiving said second signal at the other of said uphole and said downhole locations.

15. (**Currently amended**) The method of claim 14, further comprising sensing at least one parameter of interest downhole by a sensor.

16. (**Previously Presented**) The method of claim 14, wherein the at least one repeater is disposed in the wall of the wellbore by using an explosive charge.

17. (**Previously Presented**) The method of claim 14, wherein the at least one repeater is disposed in the wall of the wellbore by using a hydraulic device.

18. (**Previously Presented**) The method of claim 15, wherein the at least one parameter of interest is at least one of (i) wellbore fluid pressure, (ii) wellbore

fluid temperature, (iii) wellbore fluid resistivity (iv) formation fluid pressure (v) formation fluid temperature, and (vi) formation fluid resistivity.

19. (***Previously Presented***) The method of claim 14, wherein the first signal and the second signal are at least one of (i) an electromagnetic signal, (ii) a radio frequency signal, and (iii) an acoustic signal; and (iv) a mud pulse.

20. (***Previously Presented***) The method of claim 15, wherein the at least one of the first signal and the second signal includes data related to the at least one parameter of interest.

21. (***Currently Amended***) An apparatus for boosting signals in a communication system in a wellbore containing fluid therein, comprising at least one repeater disposed at a predetermined location in a wall of the wellbore containing the fluid therein, said at least one repeater receiving a first signal that has been attenuated through a transmission medium and transmitting a second boosted signal, wherein said second boosted signal is indicative of said first signal.

22. (***Previously Presented***) The apparatus of claim 21, wherein the at least one repeater comprises at least one of:

- . a receiving device;
- . an electronics module;
- . a transmitting device; and
- . an energy source.

23. (***Previously Presented***) The apparatus of claim 22 further comprising a processor that acts, according to programmed instructions for controlling an operation of the at least one repeater.

24. (**Currently Amended**) The apparatus according to claim 22, wherein the energy source is one of (i) a downhole generator ~~battery~~, (ii) a thermoelectric generator, and (iii) a combination of a battery and a thermoelectric generator.

25. (**Previously Presented**) The apparatus of claim 21, wherein the at least one repeater is adapted to receive and transmit signals at a plurality of frequencies.

26. (**Previously Presented**) The apparatus of claim 21, wherein the first signal and second signal are transmitted during drilling of the wellbore.

27. (**Previously Presented**) The apparatus of claim 21, further comprising at least one sensor for detecting at least one parameter of interest related to one of: (i) a downhole condition and (ii) a health of the at least one repeater.

28. (**Previously Presented**) The apparatus of claim 27, wherein the at least one sensor is at least one of (i) a pressure sensor, (ii) a temperature sensor, and (iii) a resistivity sensor.

29. (**Previously Presented**) The apparatus of claim 27, wherein the at least one parameter of interest is at least one of (i) wellbore fluid pressure, (ii) wellbore fluid temperature, (iii) wellbore fluid resistivity (iv) formation fluid pressure (v) formation fluid temperature, and (vi) formation fluid resistivity.

30. (**Previously Presented**) The apparatus of claim 21, wherein the first signal and the second signal are at least one of (i) an electromagnetic signal, (ii) a radio frequency signal, (iii) an acoustic signal, and (iv) a mud pulse signal.

31. (**Previously Presented**) The apparatus of claim 21, wherein the first signal and the second signal are wireless signals.

32. (**Original**) The apparatus of claim 27, wherein at least one of the first signal and the second signal includes data related to the at least one parameter of interest.

33. (**Previously Presented**) The system of claim 1, wherein the at least one repeater includes a plurality of repeaters in the wellbore wherein each repeater in the plurality of repeaters communicates with at least one additional repeater.

34. (**New**) The apparatus of claim 2, wherein the energy source is a battery.